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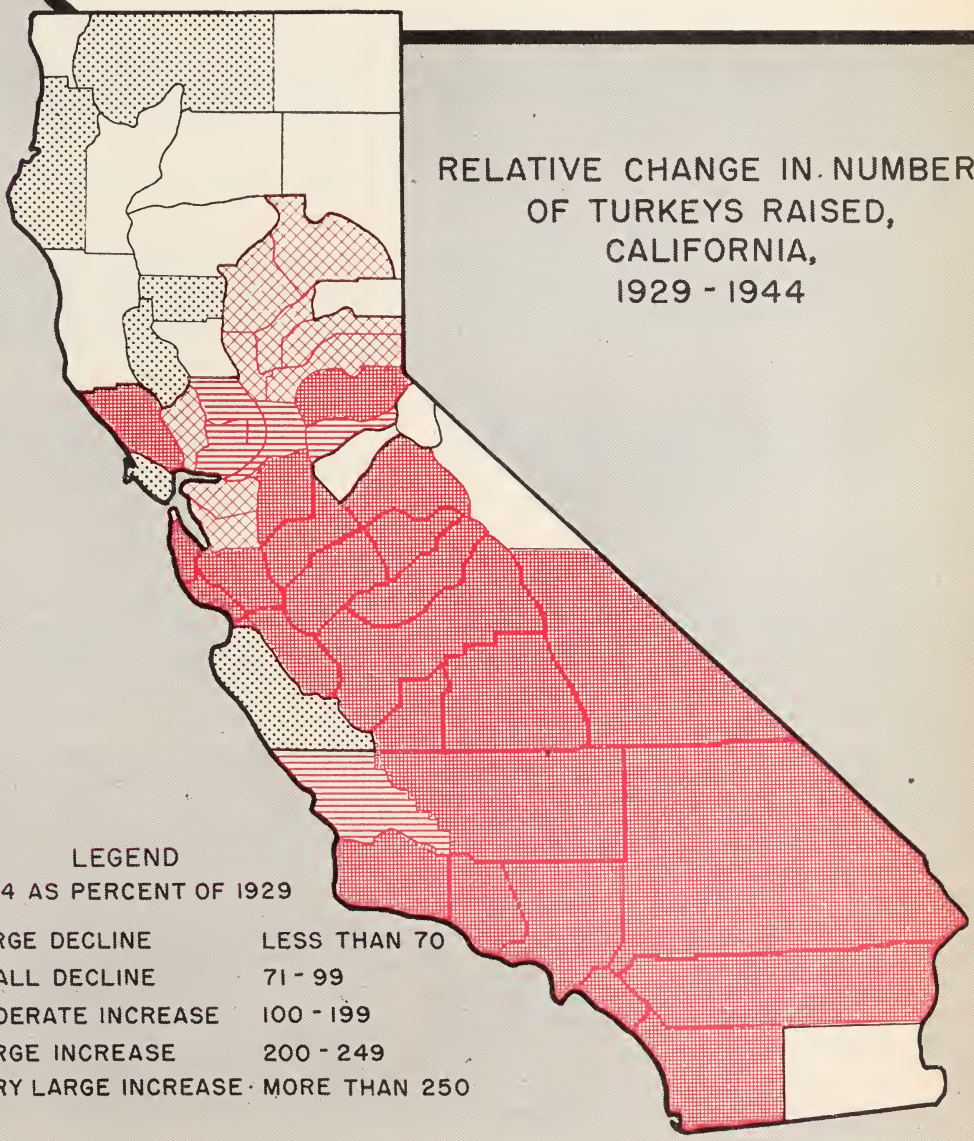
CALIFORNIA TURKEYS

SITUATION AND OUTLOOK, 1948

EDWIN C. VOORHIES


RELATIVE CHANGE IN NUMBER OF TURKEYS RAISED, CALIFORNIA, 1929 - 1944
LEGEND
1944 AS PERCENT OF 1929
LARGE DECLINE LESS THAN 70
SMALL DECLINE 71 - 99
MODERATE INCREASE 100 - 199
LARGE INCREASE 200 - 249
VERY LARGE INCREASE MORE THAN 250

THE COLLEGE OF AGRICULTURE
UNIVERSITY OF CALIFORNIA • BERKELEY

The Turkey Industry

has been marked by many important changes during the past 15 years. This circular discusses these changes and shows what effects they have had on turkey raising in California and in the country as a whole.

THIS IS THE STORY	THIS IS WHAT IT MEANS
Improved management practices have resulted in increased commercial hatchings and fewer death losses.	Production in this state has changed from a side-line to a main enterprise. Since 1943, California has raised more turkeys than any other state.
California now produces more turkeys than it needs for home consumption.	This change from a deficit to a surplus state has caused a less favorable price in California than in the country as a whole.
Improved advertising and merchandising methods, and increased storage facilities, have done much to make turkey a year-round food item instead of just holiday fare.	This means that turkey is now in continuous competition with chicken and red meats on the market. The turkey producer should watch these competing foods closely since changes in their price picture will affect his own.
Heavier birds have been developed for the restaurant and freezer trade, but smaller ones are in demand for family use.	The industry would do well to keep in mind the advantage of giving the buyer turkey in "smaller packages."
The problem of feed supplies is the most serious one facing the producer. At present, feed is scarce, and prices are high.	It may be two or three more years before feed supplies increase and feed prices go down. Foreign demands and domestic harvests will determine what happens here.
Because of an early season, prices rose sharply for the Christmas, 1947, market. Taking advantage of this, many producers sold a number of their breeder hens.	As a result, the state's present supply of breeder hens is far below the average for the war years, and will probably drop back to the 1937–1941 figures.
The U. S. Department of Agriculture's tentative goal for 1948 is 30.5 million turkeys raised in the United States. This is about 12 per cent less than the number actually raised in 1947.	This means fewer birds available, at higher prices, but these prices will probably not continue beyond 1948. And *net returns* in the next few years may fall considerably below the high profits of 1943–1946 since, in spite of high prices, there will be fewer birds to sell.

CALIFORNIA TURKEYS

SITUATION AND OUTLOOK, 1948

EDWIN C. VOORHIES

Professor of Agricultural Economics, Agricultural Economist in the Experiment Station and on the Giannini Foundation

TURKEY PRODUCTION

California is now a surplus state in turkey production. Since 1943, it has raised more turkeys than has any other state.

Production Changes

Confusion and misunderstanding exist among turkey growers and others with regard to the meaning of some of the terms used in describing production changes. Before 1929, estimated numbers of turkeys on farms on a given date, in certain isolated years, were reported by the Census Bureau. This made it difficult, if not almost impossible, for a turkey grower to know of the frequent changes taking place in his own state or in the country as a whole.

Since 1929, total numbers of turkeys have been estimated for the country and its subdivisions each year. These data have not been so useful as might be thought because of changes in production methods, especially in the raising and purchase of poults. The turkey raiser is now able to get along with far fewer breeding birds than formerly. Since 1937, separate estimates have been made of the breeder hens on farms in addition to the total number estimates.

The commercial producer of turkeys is concerned with the number of birds actually being raised by all growers. Annual estimates are now made of turkeys raised each year. Again there is at times some misunderstanding of terms used. To state that 5,762,000 turkeys were raised in California in 1945 does not mean that this number was actually eaten in that year. Every grower knows that many of the turkeys raised in 1945 were added to breeding flocks and that a considerable number of these birds were sold in 1946. Sometimes it is possible that the number sold in one year may be larger than the number raised in that same year. For example, birds intended originally for breeding purposes may be sold or eaten. In some years a considerable number of birds may be saved to build up the breeding flock.

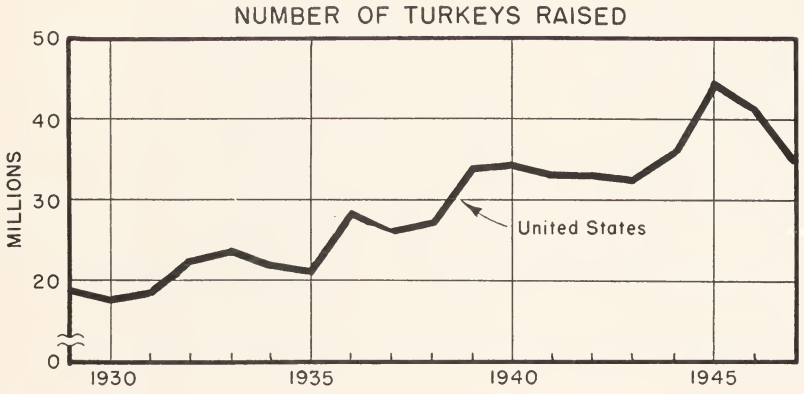
No exact data on turkeys consumed each year are available, but a simple calculation can be made. Annual estimates are made of turkeys eaten on farms, together with the number sold. The turkeys sold by farmers are eaten in most instances by persons other than those on farms. The number sold plus the number eaten on farms gives a fair estimate of the approximate number of turkeys eaten in the country annually.

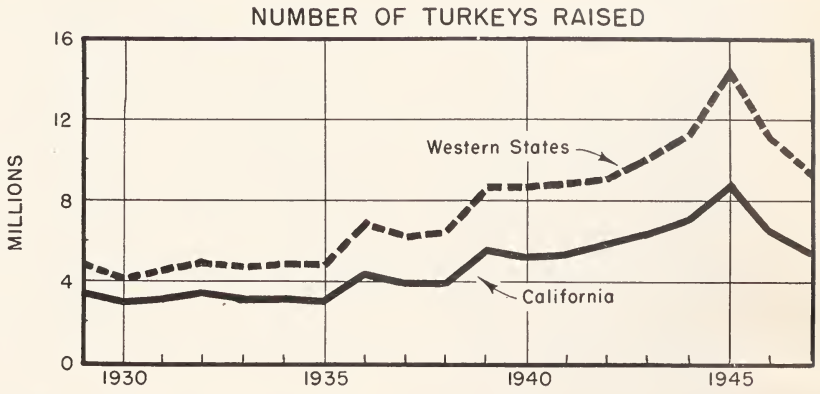
United States

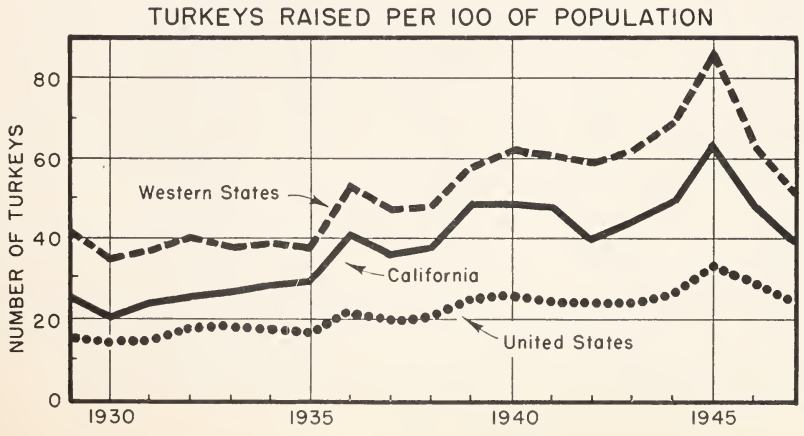
There was a downward trend in turkey numbers in the United States from 1890 to 1920. In 1890, 11 million turkeys were counted on farms, while in 1920, this number had dropped to only three and one-half million. In the 1920's this downward trend in numbers was arrested, and in the 1930's the upward trend was rapid. This increase continued until 1945 when

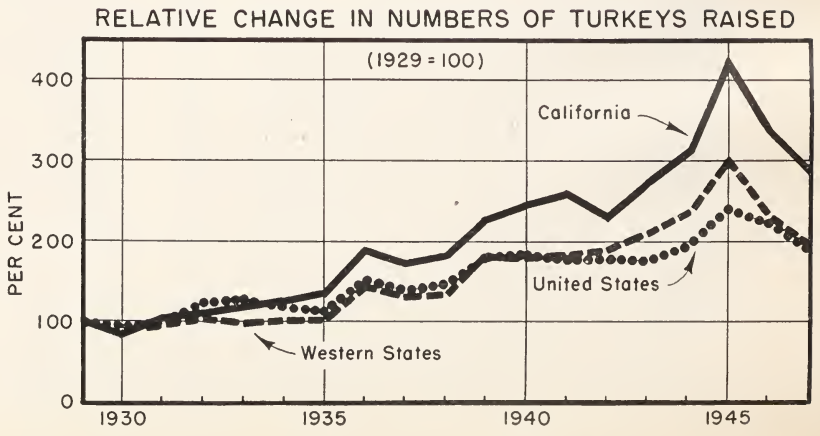
FIGURE 1

TURKEYS RAISED, UNITED STATES, WESTERN STATES, AND CALIFORNIA, 1929 - 1947









all records of production were broken, with approximately 44,221,000 reported raised. Sixteen years earlier, in 1929, production was estimated at 18,476,000. The increase in the sixteen years was only slightly less than 160 per cent. The average number of turkeys raised in the five years 1940–1945 was more than twice the average for 1929–1933. In 1946, numbers raised dropped about 8 per cent below the 1945 record.

Although the United States Department of Agriculture announced a goal of 40.38 million turkeys for 1947 (an increase of 6 per cent over 1946), final returns from 1947 production will probably show a drop of about 16 per cent from the previous year. The number raised, however, will be about 5 per cent above the average for 1939–1943.

No one cause, in itself, explains the declines in 1946 and 1947. The 1946 downturn was most pronounced in the three Pacific Coast states, largely because many growers were unable to obtain feed. Because of the number of heavier and older birds sold, the total number of turkeys actually eaten in 1946 was about the same as in 1945. A factor having considerable effect on the 1947 production was the price drop which occurred after Thanksgiving in 1946. Another, and more decisive, factor was the deteriorating relationship between turkey and feed prices.

California

Available evidence indicates that in all probability California's turkey production trended downward after 1890. From the census data it would appear that the subsequent upturn got underway in California earlier than in the nation as a whole—probably about 1915. When, in 1929, the number of turkeys raised was estimated, indications were that only Texas, North Dakota, and Minnesota ranked California.

From 1929 to 1939, California production practically doubled, and in the latter year only Texas produced a larger crop. Rapid production continued so that in 1943, the state was first in numbers raised. In pounds of turkey produced, California became the number one state in 1941, and insofar as sales from farms are concerned, the first position was attained in 1940 and held through 1947. In 1945, the number of birds raised was 5.8 million, or about one eighth of the United States total. Numbers raised in 1946 dropped by 1,152,000 birds, or 20 per cent from 1945. The number consumed on and sold from farms declined by only 741,000, indicating that inventories were being curtailed. The 1946 drop was primarily the result of a severe feed shortage. Preliminary 1947 estimates indicate a drop of almost 700,000 birds from 1946—a decrease of approximately 15 per cent. This is about the same rate of decrease as was estimated for the nation. Although the California production goal of the United States Department of Agriculture for 1947 was almost the same as for 1946, the actual production was lower.

Farm Income from Turkey Production

Farmers as well as organizations have expressed an interest in the relative importance of certain agricultural products as compared with others. Conclusions are often misleading because of a failure to state exact terms of comparison. In 1945, the cash farm income from California turkey sales was estimated to have been six times that of 1929—while in the United States the income between the two years had increased fivefold. Beginning in 1936, cash income from turkey sales was larger in California than in other states—a position held through 1947.

These figures do not include an estimate of returns from sales of eggs and poults, nor is the value of turkeys consumed on the farms of the growers taken into account.

In the period 1944–1946, the cash income from turkeys sold from California farms exceeded that from sales of chickens (not including broilers from com-

mercial broiler plants). In 1945, the cash income from turkeys sold was estimated to have been almost half as large as that from chicken egg sales. There was a decided decline in 1946 and 1947.

What has been stated for California with reference to cash income from turkey sales does not hold for the United States as a whole. The nation's cash income from turkey sales has grown more rapidly than that from farm chicken sales, and in some years (1945) has amounted to almost one half as much. But the cash farm income from turkey sales has grown less rapidly than that from the sales of commercial broilers. These facts show the increasing importance of California in the turkey field as compared with the nation as a whole.

Per-capita Production

In 1929, approximately 0.15 turkeys per person were raised in the United States. By 1939, this had grown to 0.25, and in the 1945 peak production year it was almost 0.32. The drop to about 0.24 in 1947 put per-capita production back to an average below that for the five years 1939–1943.

Because turkeys vary in weight (p. 10) from year to year, and from state to state, more accurate production comparisons could be made if data were based on the pounds of turkey produced per capita. From 1940 through 1946, when such data became available, there was an incease from about 3.8 pounds to almost 5 pounds in the United States.

The western states have been heavy producers in relation to population. In 1929, approximately 41 birds per 100 inhabitants were raised, 57 by 1939, and almost 86 in 1945. The 1947 production was only 52—or 60 per cent of the 1945 average.

On a poundage basis, the per-capita production in the western states increased from approximately 10 to 12 between 1940 and 1946.

Even with the rapid increase in California's population, turkey numbers per 100 inhabitants increased from about 25 in 1929 to 48 in 1939, and to 69 in the peak year of 1945. In 1946 and 1947, there was a drop to 48 and 40, respectively. The latter numbers are not high compared with the average for the years beginning in 1936. Between 1940 and

Table 1

TURKEYS CONSUMED ON AND SOLD FROM FARMS: CALIFORNIA, WESTERN STATES, AND UNITED STATES

Period	California	Western states	United States	Relative changes 1929–1933 = 100		
				California	Western states	United States
	thousands of turkeys					
Averages:						
1929–1933	1,374	4,548	19,424	100	100	100
1935–1939	2,309	6,281	24,038	168	138	124
1940–1944	3,787	9,594	33,364	276	211	172
Annual:						
1945	5,629	13,953	42,501	410	307	219
1946	4,888	12,254	42,287	356	269	218

1946, even with the rapid population increase, the number of pounds per capita increased from about 8 to 9.

Shifts in U. S. Production Areas

Shifts between areas of production have occurred with great rapidity and, as will be seen below, have altered California's position in the industry most markedly.

In 1890, the northern and southern sections of the Mississippi Valley contained 50 and 20 per cent of the nation's turkeys, respectively. The Atlantic Coast states accounted for some 26 per cent, leaving less than 4 per cent for the eleven western states.

By 1920, all major sections of the country except the eight mountain states had lost numbers. The relative position of the western and southern Mississippi Valley states was higher than it had been previously. The industry was moving westward and southward.

This movement continued so that by 1929, the south central and north central states each accounted for almost a third of the total turkey crop. The western states by this time were raising over a quarter of the nation's total turkey crop.

Production in the south central states changed only slightly during the 1930's when increases were particularly rapid elsewhere. Western production continued to grow, actually and relatively, compared with the country as a whole. The largest relative gains in production, however, occurred in the industrial northeast (the north Atlantic states and the east north central states).

The pull toward the West continued during the war period, although again the largest relative production gain was in the north Atlantic states. In 1944 and 1945, the western states led all other areas of the nation in turkey production, and California was in the first place among all states for those two years and for 1946 and 1947 as well.

Declines in 1946, compared with 1945, were almost all reported from the three Pacific Coast states and Utah, and were largest in areas of commercial flocks. Lack of feed supplies was responsible. In

Table 2

TURKEYS RAISED: CALIFORNIA, WESTERN STATES, AND UNITED STATES

Period	Number raised			Relative changes 1929–1933 = 100		
	California	Western states	United States	California	Western states	United States
	thousands of turkeys					
Averages:						
1929–1933	1,405	4,587	19,944	100	100	100
1935–1939	2,465	6,572	27,006	175	143	135
1940–1944	3,786	9,731	33,536	269	212	168
Annual:						
1945	5,762	14,342	44,221	410	313	222
1946	4,610	11,134	41,109	328	243	206
1947*	3,918	9,354	34,667	279	204	174

* Indicated crop.

the midwest, however, many small producers, and even some larger ones, who had adequate feed supplies actually increased their turkey offerings. The 1947 production estimates were rather uniformly lower than those for 1946 in all sections except the north Atlantic and east north central states, where the decline was materially less.

Shifts in California Production Areas

Available evidence indicates that before 1900, two thirds of the state's production was in the Great Valley. The remaining third was from sections scattered throughout the state.

By 1929, the Great Valley still raised about two thirds of the state's turkeys—the northern part (Sacramento Valley) about 40 per cent, the southern part (San Joaquin Valley) 24 per cent. Southern California followed with about 20 per cent.

Between 1929 and 1939, the San Joaquin Valley and southern California forged ahead with increases of 224 and 206 per cent, respectively. The San Joaquin Valley counties raised 39 per cent of the state's turkeys in 1939 as compared with 24 per cent in 1929, while production in the southern California counties rose from 20 to 30 per cent of the state's total in that ten-year period. The Sacramento Valley, during that same decade, showed some increase in actual numbers raised but its share in the state's total dropped from 40 to 22 per cent. Outside of the Great Valley and southern California, most of the remaining turkeys have been reported from the coast counties (north of Santa Barbara).

By 1944, census returns showed another pronounced shift in production. In the San Joaquin Valley, production rose to 53 per cent of the state's total, 45 per cent of this from five counties—Merced, Stanislaus, Fresno, Tulare, and San Joaquin—which reported 1,840,283 turkeys raised in 1944.

Between 1939 and 1944, southern California reported a gain of 100,000 in numbers raised, but its percentage of the state's production dropped back to 20—the same as in 1929. The Sacramento Valley, with only 13 per cent of the state's total, failed to gain in relative importance.

The concentration of production in the turkey industry differs from that in the state's chicken and egg industry. Throughout the turkey industry's history, the Great Valley has been the dominant area, with from 60 to 70 per cent of the total production over the past five decades originating there. This concentration results from certain physical factors, such as the relatively dry climate, nearness to range, irrigated pastures, and grain. The concentration in the egg industry is more largely in the coastal areas. The production of chickens as a percentage of the state's total has increased more rapidly in the San Joaquin Valley than elsewhere.

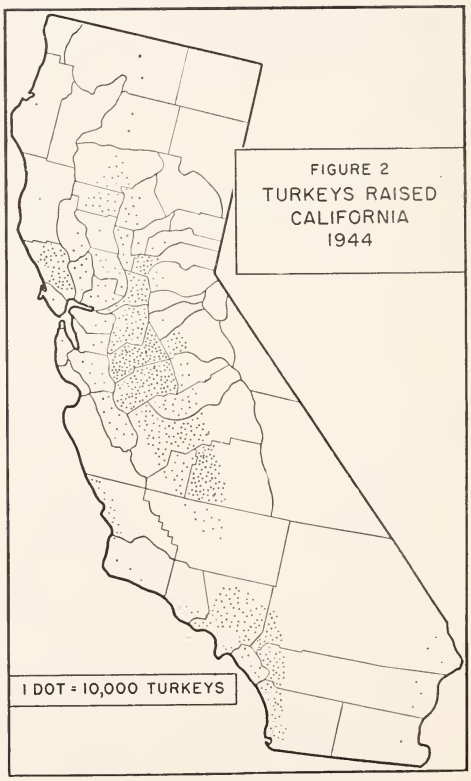


FIGURE 2
TURKEYS RAISED
CALIFORNIA
1944

RECENT ECONOMIC CHANGES

More turkeys are now raised on fewer farms. Sales are year-round instead of at holiday seasons. Demand for light-weight birds is up.

Number of Growers

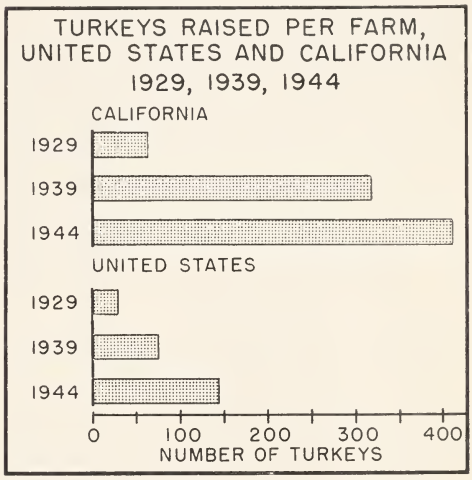
Since 1909, turkey production in the United States has become more centered on fewer farms. The discovery of ways to control Black Head and other diseases, and the development of artificial incubation and brooding have helped encourage larger units. Changes in feeding, and the establishment of modern killing and dressing plants have also worked in this direction. In 1909, 14 out of every 100 of the nation's farmers reported turkeys raised. By 1919, this figure dropped to 10, and twenty years later, to 6. From 1939 to 1944, the number was almost halved, a low of 3 being reached in the latter year.

The percentage of farmers in California reporting turkeys in 1909 was similar to that reported for the United States. For the following twenty years, the trend was different from that for the entire country, the percentage being 14.3 in 1919 and 14.6 in 1929. During the next ten years, the percentage dropped more than half, to 6.1 in 1939. In the next five years, the state ran counter to the trend in the nation, with an increase to 7 per cent by 1944. Actual growers increased from 8,148 in 1939 to 9,896 in 1944. In California, a number of new turkey ventures have been started since 1939. These new ventures, plus increases in ones already established, have brought California to the front among the turkey-raising states in the nation.

Production per Farm

The general decline in the number of growers in the United States has been accompanied by a pronounced increase in the number of birds raised per farm. In 1929, some 26 birds were reported raised by each grower, and by 1944 the number had grown to 140.

Between 1929 and 1944, the California per-farm production has grown from 63 to 415 birds. This concentration of large flocks has not been limited to California, as Utah and Iowa growers reported 1,411 and 1,247 birds raised per farm in 1944.



Oregon, Minnesota, and Washington reported a larger production per farm than California—594, 573, and 437, respectively.

From 1929 to 1939, the number of California turkey growers dropped almost 59 per cent while at the same time, the output per grower increased almost 410 per cent—from 63 to 318 birds. The changes were greatest in the San Joaquin Valley, where the number of turkey raisers dropped 70 per cent and total output increased 224 per cent in these ten years. On a farm basis, the average output rose from 44 to 446 birds, an increase of over 900 per cent!

From 1939 to 1944, the number of California growers increased a fifth while the output per farm increased by about a third. The increase in growers over the war years apparently was most pronounced in the central and northern coast

counties. Southern California was next, while the Great Valley reported only a slight increase in grower numbers, but at the same time doubled its total production. The most pronounced increase in numbers of turkeys raised per farm in this period was in the San Joaquin Valley—approximately 950 in 1944. Southern California followed with 327, a slight decrease from 1939. The Sacramento Valley also dropped—to 235. The central coast area increased the per-farm output from 138 to 274 in the years mentioned.

These data would indicate that during the war period a considerable number of new turkey ventures were started, especially in areas where turkey raising had not previously played an outstanding role. At the same time, the large increase in the size of the flocks of the San Joaquin Valley emphasizes the growing commercial importance of that area.

Average Live Weight of Turkeys Sold

Along with an increase in turkey numbers raised, there has been a decided increase in the average weight of birds sold. In 1930 and 1946, the estimates of average weight for the state were 17.4 and 20.4 pounds, and for the nation, 13.4 and 15.2 pounds, respectively. The significance of these increases may be lost from view when yearly increases are considered. Comparing 1946 with 1929, the number of birds raised in the nation in the former year was estimated to have been slightly over one and one-third greater than in the later year, while if the estimated weights are compared, 1946 accounted for two and one-third more pounds than 1929 estimates.

Since 1941, estimates have been made on the comparative weights of hens and toms—the averages in the state being 14.1 pounds for hens and 23.6 pounds for toms. It is probable that the larger proportion of the broad-breasted type of birds sold has served to increase weights.

It should not be inferred that the demand has been solely for a larger bird. In fact, the opposite is true. While turkeys of large size and broad breast have met with much favor from the freezer trade, restaurants, hotels, etc., there has been a decided demand recently for lighter-weight birds. This demand has come particularly in the holiday season and largely from the family trade.

Expansion of Sales Period

Sales from farms in recent years indicate a trend away from November and December although there is still a concentration in these months, 67.2 and 63.8 per cent of sales in 1945 and 1946, respectively. The preliminary estimate for

Table 3

NUMBER OF BREEDER HENS: CALIFORNIA, WESTERN STATES, AND UNITED STATES

Period	Number on January 1			Relative changes 1937–1941 = 100		
	California	Western states	United States	California	Western states	United States
	thousands					
Averages:						
1937–1941	349	771	3,818	100	100	100
1942–1946	655	1,274	4,426	188	165	116
1947 estimate	557	1,108	4,213	160	144	110

1947 indicates that the total proportion of the season's sales in November and December will be 67.1 per cent. The most pronounced increases in sales have occurred in October and September. Marketings from farms during those two months varied from 11.2 to 23.2 per cent of the year's total during the years from 1941 to 1946 inclusive. July marketings have been almost negligible while those during the first six months have reached as much as 10 per cent of the year's total.

The western states have the widest variation in seasonal sales. California, although producing early birds, has led the country in heavy birds marketed in January, or after, for the freezer market. Since California has been foremost among those states producing birds for the freezers, this has influenced a trend toward larger weights.

Flocks of early birds are easier to raise throughout much of the country. They have smaller death losses and are in less danger of early winter storm losses than later-hatched poults. Producers have realized that one method for increasing sales was increasing consumption outside of the "holiday period." Another reason for early production in certain years has been the relationship of feed costs to turkey prices. For example, high feed prices and relatively low turkey prices late in 1946 undoubtedly influenced growers toward earlier marketings in 1947.

About three fourths of the early turkeys are produced in the western and west north central states, with California, Iowa, and Minnesota leading all states in production for the October and November markets.

Technical and Management Factors

Although it does not seem advisable to discuss management factors in this publication, there have been a number of changes within the industry which have had such profound economic effects on its setup that they cannot be ignored.

While perhaps no one factor is altogether responsible for changing turkey raising, in many sections, from a small side-line to the main, and, in some cases, to the only enterprise, some factors are worth mentioning. Commercial flocks were reported as early as 1888 in California, but until recently, production was long confined to small farm flocks. Development and improvement in artificial incubation and brooding have offered an opportunity for expansion and concentration in California and elsewhere.

Data released by the California Crop and Livestock Reporting Service in 1947 indicated for the first time how extensively turkey poults were used to supply the growers of the state. Evidently the record crop of birds produced in 1945 came largely from the almost 8 million poults produced by commercial hatcheries in that year. In the following year, the number dropped to less than six and one-half million. The principal area of production is in the Great Valley where 70 per cent of the hatcheries used exclusively for turkeys are located. (See figure on cover.)

For a good many years, California has been one of the largest shippers of hatching eggs to the middle west, and it may continue in that role if some of the difficulties in the adjustment of supply and demand can be solved. During 1942–1946 the average number of breeder hens estimated for the state was 88 per cent larger than in the previous five years—compared with a 16 per cent increase for the nation.

Advances in knowledge of the prevention of certain turkey diseases and a tendency for turkey losses to decline with improved management practices have made for fewer physical hazards. While it is extremely difficult to offer exact information on causes for turkey losses, the fact remains that the percentage of young turkeys lost and of breeding stock lost has dropped. This decline, especially noticeable from 1941 through 1946, no doubt influenced the concentration of produc-

tion in certain areas. In the United States, 1941–1943, from 27.8 to 29.7 per cent of the young turkeys were lost (per cent of total numbers bought and home-hatched). In the following three years, this percentage ranged from 21.7 to 25.7. Similar losses in the western states for the same periods were 21–22 and 16–22 per cent, respectively.

Breeding stock lost (per cent of breeders on hand January 1) was estimated at from 10.5 to 11.4 in the three years from 1941 through 1943, and 8.3 to 10.4 in the following three years. The western states showed the lowest losses in these six years, 7–8 per cent for the first half of the six-year period, 6–7 per cent for the second half.

TURKEY CONSUMPTION

California's turkey consumption is higher than the nation's. Cold-storage holdings make turkey available throughout the year.

United States

Numerous factors, some of which have been described, have led to a steady increase of approximately 0.1 pound per year in turkey consumption over the eighteen years from 1929 through 1946.

While no consumption data are available for California, certain indications point to a higher consumption in the state than in the country as a whole. For a number of years, the state has been one of surplus turkey production. Per-capita income has been higher than average. The state is dependent upon other areas for a large part of its heavy breeds of chickens. Higher relative freezer holdings in the state are reported for recent years.

The increase in turkey consumption from 1929 to 1947 is the result of not just one, but of several changes. At present, turkey meat is eaten the year round. Formerly, consumption was limited to two or three holidays—Thanksgiving, Christmas, and perhaps New Year's. Many American families eat in restaurants more often than formerly. This has increased turkey consumption, since public eating places can handle large birds readily. During the war years—and after—a number of factors increased demands for turkey. Among these were rationing, the difficulty of obtaining red meats, and the high buying power of the population. It is not definitely known what influence military requirements had, but it might be emphasized that in the four years,

Table 4

CONSUMPTION* OF TURKEY AND CHICKEN, UNITED STATES

Period	Per-capita consumption in pounds			Relative changes in per-capita consumption, 1929–1931 = 100		
	Turkey	Chicken	Turkey and chicken	Turkey	Chicken	Turkey and chicken
Averages:						
1929–1931	1.8	20.2	22.0	100	100	100
1932–1934	2.2	19.6	21.8	125	94	97
1935–1937	2.5	18.1	20.6	142	90	94
1938–1940	3.1	18.1	21.2	176	90	97
1941–1943	3.5	24.8	28.3	198	123	129
1944–1946	4.0	27.0	31.0	227	134	141

* Civilian consumption.

1942–1945, the armed forces took 320 million pounds of turkey, or almost 15 per cent of the nation's total production.

Although the widening of the marketing period has had an influence in expanding the consumption period, consumption would not have increased so rapidly without year-round cold storage.

Estimates of the Bureau of Agricultural Economics indicate that in the early 1930's, less than 25 million pounds of storage turkey were consumed in the United States—less than 5 per cent of the total crop. In 1945 and 1946, in addition to increased holiday demands, consumers used more than 50 million pounds of storage turkey—over 10 per cent of the country's annual production.

Average United States holdings at the storage peak, from 1943 to 1947, were 87 million pounds, as compared with 19 million in 1932–1936, an increase of about 450 per cent. Corresponding amounts for the three Pacific Coast states were 22 million and 4 million pounds, an increase of approximately 550 per cent. In recent years, about 25 per cent of the freezer supplies have been held on the west coast.

With the earlier marketing there has been a decided tendency toward an earlier emptying of the coolers—in recent years the low point has been either September 1 and October 1 instead of November 1.

Recently data have become available which indicate the apparent amount of turkey eaten during the first six months of the years 1941–1946. The average for these six years was approximately 66 million pounds (dressed weight). The estimate for the first six months of 1947 is approximately 110 million pounds.

Turkey consumption has undoubtedly been increased by certain improved merchandising methods. An increase in frozen eviscerated turkeys has been noticeable. In many localities, birds have been in "cut-up" form, such as halves. Wartime requirements resulted in a considerable increase in the amount of turkey canned.

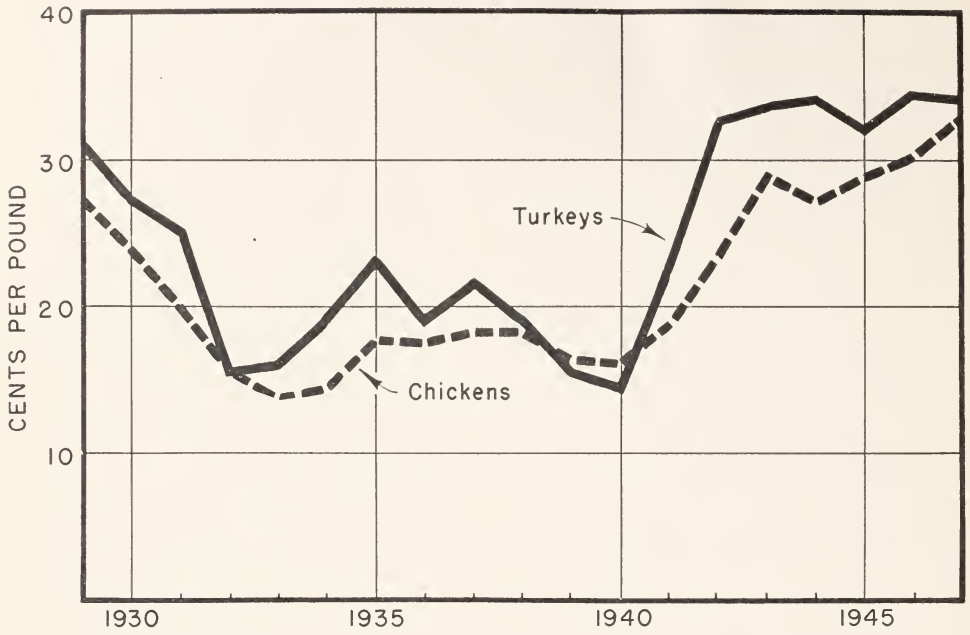
Table 5

FARM PRICES OF TURKEYS FOR FOUR SELECTED STATES, 1912–1947, AVERAGE OF NOVEMBER AND DECEMBER PRICES

Years	California	New York	Illinois	Texas	Differential between California prices and those in:		
					New York	Illinois	Texas
	cents per pound						
Averages:							
1912–1915	20.1	20.1	15.1	11.2	0.0	+5.0	+8.9
1916–1920	32.5	34.4	26.4	21.9	−1.9	+6.1	+10.6
1921–1925	33.8	41.3	31.3	22.4	−7.5	+2.5	+11.4
1926–1930	34.8	40.1	29.4	22.5	−5.3	+5.4	+12.3
1931–1935	19.7	23.6	15.7	13.1	−3.9	+4.0	+6.6
1936–1940	17.9	24.0	16.2	13.0	−6.1	+1.7	+4.9
1941–1945	30.9	37.3	29.4	27.3	−6.4	+1.5	+3.6
Annual:							
1946	34.5	48.0	37.5	31.9	−13.5	−3.0	+2.6
1947	36.3	45.3	38.0	33.0	−9.0	−1.7	+3.3

FIGURE 3

PRICES PAID PRODUCERS FOR TURKEYS AND CHICKENS, CALIFORNIA



TURKEY PRICES

Main factors influencing prices to producers are: consumer buying power; turkeys available; and competition from chicken and red meats.

Regulatory Measures

In any comparison of prices, including those of recent years, we must take into account government support and purchasing programs as well as the rulings of the Office of Price Administration. The prices received by farmers were affected by the numerous regulatory measures even though those measures did not always apply to turkeys. Especially important, from the turkey grower's standpoint, were the wartime purchases for use in the armed forces.

In November, 1942, turkeys along with chickens (excluding birds weighing less than 3.5 pounds) were brought under a Stabilization Act. This act was designed to support turkey prices at not less than 90 per cent of parity. A support program was announced for 1947. The last date for support will probably be December 31, 1948. In common with other poultry products, turkeys were removed from price controls on July 1, 1946.

Producer Prices, United States

From 1909 until 1932, prices paid producers for turkeys were reported for the United States and separate states for October, November, December, and January. Beginning in 1933, prices were reported for all months—some indication perhaps of changes in production, consumption, and marketing.

Turkey prices in the past have been subject to rather sharp up and down price movements. There were steep price uptrends during and after both world wars—from 14.9 cents per pound in 1915, to 32.0 cents in 1920, and from 15.4 cents in 1940, to 36.2 cents in 1946.

Between 1920–1921 and 1924–1925, a price drop of 7 cents was recorded. This was followed by a considerable recovery in the last half of the 1920's. The drop between 1928–1929 and 1933–1934 was even more severe than that in other farm commodities. Although some recovery occurred in the latter 1930's, prices were lower than they had been in the corresponding period of the 1920's. The 1930's were years of greatly expanding production.

The peak in the postwar price paid to farmers came about October 15, 1946, when a paying price of 40.6 cents per pound was reported. By March 15, 1947, the price had dropped to 29.7 cents. What the total drop would have been without price support is hard to say. Little change in price occurred until September when the new crop of turkeys began to appear on the market. The average 1947 price was only slightly under that for 1946—the result of year-end strengthening.

Relative prices for turkeys were higher throughout the 1920's than those for all farm products (or for all commodities) when compared with the 1910–1914 average. The decline during the depression of the early 1930's was relatively greater than that for farm prices in general. In the latter 1930's, turkey prices were a shade lower relatively than general commodity prices, but relatively above general farm prices. From 1940 through 1943, turkey prices rose relatively higher than either general farm prices or general commodity prices. Since 1943 and through 1947, turkey prices have leveled out in a different way from general farm prices or general commodity prices.

Producer Prices, California

Between 1909 and 1938, California turkey prices averaged higher than those for the United States. From 1912 through 1931, California prices were approximately 6 cents higher than those for the United States. During the next seven years, when the state's turkey industry was growing rapidly, prices averaged about 3 cents over those in the country as a whole. In 1939, the state's average price to producers fell below that for the United States for the first time. This dip below the national average continued through 1940. From 1941 through 1943, the state again topped the average of the country, but beginning with 1944 and through 1946, a lower than the average nationwide price has prevailed.

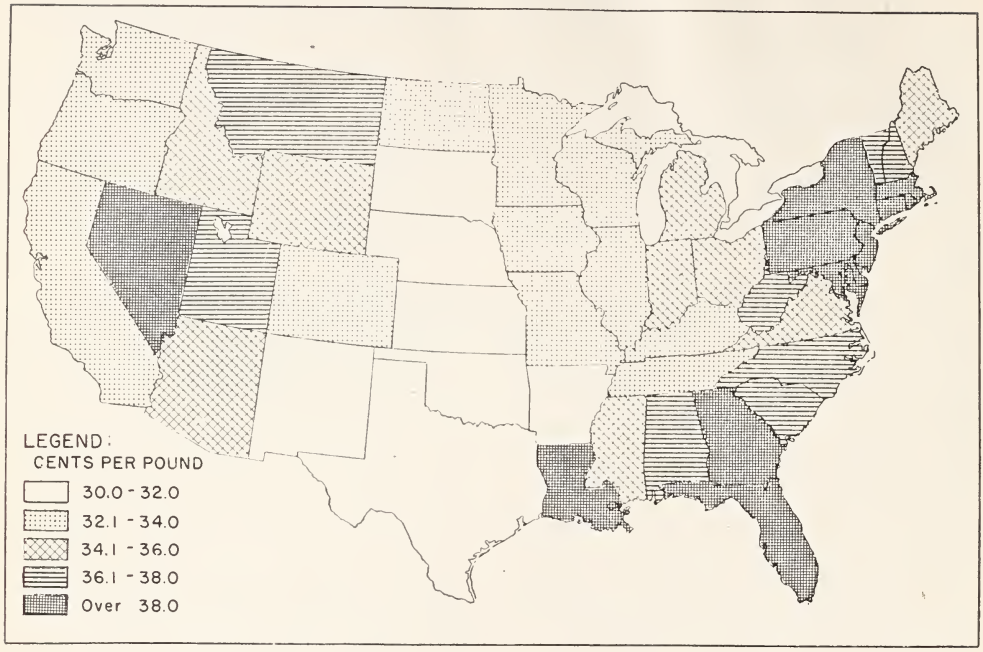
Geographic Shift in Prices

Before 1920, highest producer prices were reported from the Pacific Coast and North Atlantic states, while the lowest were found in the western and southern Mississippi Valley states. Comparisons between producer prices in some of the states will show a few of the price changes which have come about over the last three or four decades. Texas and Oklahoma growers, from 1912 through 1914, were receiving the lowest prices in the United States—slightly over 11 cents per pound. California and New York producer prices were reported at over 20 cents. With the shifting of turkey production westward, a differential in favor of New York began to show up. Since 1914, New York producers have reported higher prices than California for every year except 1926. While Texas and Oklahoma are still low-price areas, the greatly increased production elsewhere has narrowed price differences between those states and California. Producer price comparisons between Illinois and California show that producer prices in the former state have improved to a greater extent than have those in California in the past two decades.

Prices for Tom and Hen Turkeys

Until the last half of the 1930's, there were no great differences between paying prices for young hen and young tom turkeys at either Los Angeles or San Francisco. They have only been wide since 1937. In November, 1940, at San Francisco, paying prices for live young

FIGURE 4
GEOGRAPHIC DISTRIBUTION OF FARM PRICES OF TURKEYS,
AVERAGE 1943 - 1946



toms averaged 16 cents; for young hens, 24.6 cents. In December, 1947, at Los Angeles, corresponding prices averaged 34 and 43 cents, respectively.

There seems to be rather conclusive evidence that the family trade has developed a preference for lighter birds. More of these are available when the demand for heavy birds for the freezers is not strong. This demand for a smaller-sized turkey has come about because, though American families have increased in number, their average size has declined. In 1946, the weight of hens sold in the United States was estimated at 13.8 pounds—toms at 21.9. During the war years, the production of heavy turkeys was very high. The trend at present is apparently back toward a higher percentage of mediums and small birds. This is shown primarily by an interest in Beltsville Small White turkeys. Large-scale commercial producers demand broad-breasted Bronze turkeys, which means larger birds.

Seasonal Variation in Price

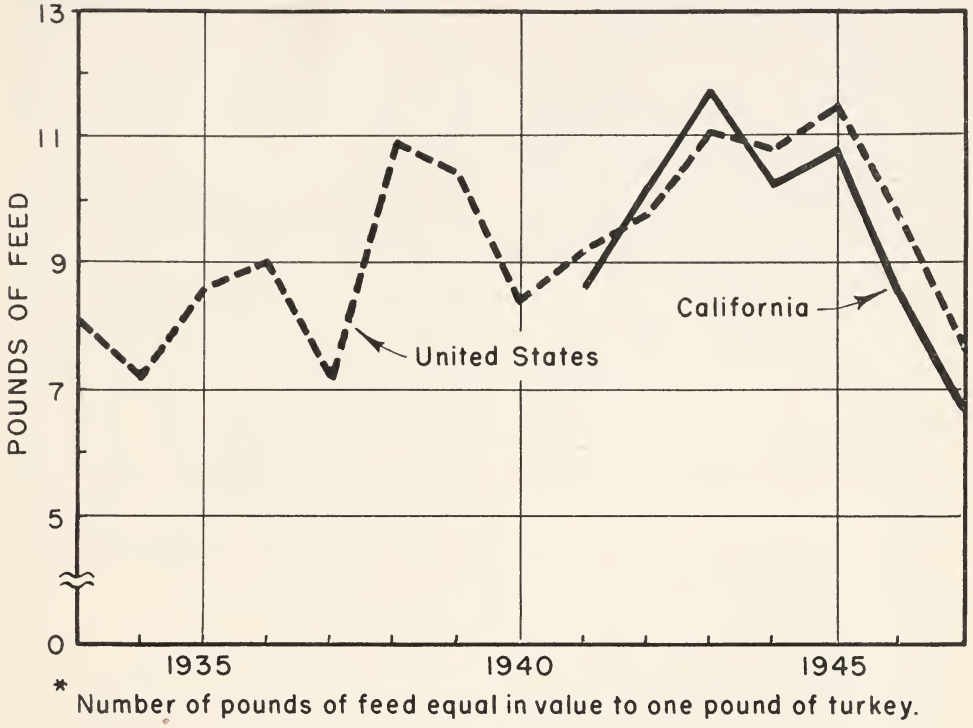
Among the factors influencing the seasonal variation in price is the maturity of the birds. In some years, because of climatic and other natural factors, a smaller percentage of the crop is available for market before Thanksgiving than in other years. When maturity is normal or above, there is likely to be less price fluctuation during the marketing season, provided there is fairly accurate information on totals to be marketed. When maturity is slow, a smaller number of turkeys at the beginning of the season will probably sell at a price considerably above the season's average, and the large number available at the season's end will cause a lowering of prices.

In 1947, turkey marketings of the country were earlier than usual. The proportion marketed before November was particularly large. The effect of this situation showed up clearly in California markets. For example, prices on young hens on the

FIGURE 5

TURKEY FEED-PRICE RATIOS*

UNITED STATES 1933-1947, CALIFORNIA 1941-1947



* Number of pounds of feed equal in value to one pound of turkey.

Los Angeles market moved up 5 cents per pound between Thanksgiving and Christmas, 1947.

Attention has been called to the increase in the number of turkeys in cold storage, especially since 1940. The supply of turkeys in storage in the future will have considerable influence on price—may, in fact, change the seasonal price picture. Large holdings at the time early turkeys are coming onto the market would tend to lower prices.

At times (1944–1946), even the amount in storage at the normal low point in holdings—September 1 or October 1—will have an effect on prices during a part of the holiday period.

Factors Influencing Turkey Prices

Changes in almost all phases of the turkey industry have been so rapid that few intensive detailed studies have been made of the factors influencing annual prices.

Among the supply factors, the number of turkeys available is the main one influencing price. Over a period of time, the relationship between numbers produced and the human population has had an influence.

The supply of and prices for all foodstuffs has an influence on turkey prices. The most intensive competition is offered by the number of chickens and broilers produced. A comparison between turkey and chicken prices to producers indicates a close correlation between the two. There is no conclusive evidence to show that supplies of red meats influence turkey prices, but it seems reasonable to assume that they do. Now that turkey is available through what was once considered out-of-season production and more storage birds

are used, the consumer has a greater opportunity to compare prices. From 1941 into 1947, a period when turkey became a possible daily article of diet in many localities, beef, pork, and lamb prices undoubtedly had some influence on turkey prices.

The amount of money available to people for spending is one of the dominant factors affecting the level of prices received by growers. The amount which the average individual in the United States could spend dropped sharply from 1929 through 1933. Although there was a steady increase after the latter year, it was not until 1941 that the 1929 level was reached. From 1941 through 1947, there was so great an increase that the amount available for each person to spend in 1947 was over twice what it had been in 1929.

Before World War II, turkey prices reacted as do most prices for the luxury or semiluxury groups of foodstuffs. Although this partly explains some of the price movements which prevailed before the war, the question arises as to whether turkeys will continue to hold this position —as a luxury or semiluxury.

Unfortunately, retail prices for turkeys are not available for study. In the principal cities of California, turkeys have been increasingly on display in butcher shops along with red meats. Checks on advertisements indicate that more advertising has appeared in the newspapers for the first ten months of 1947 than has appeared in similar periods previously. There can be no question but that in the minds of many consumers, turkeys are no longer a luxury or a semiluxury item when comparisons are made between red meat and turkey retail prices.

Aside from the number of turkeys available for market and the production of chickens and red meats, the chief demand factor affecting turkey prices during the next few years will be domestic consumer purchasing power. While national income remains near the high average of 1943–1947, turkey prices will probably be higher than the lower level of the prewar years.

Considering the available evidence, it would appear that turkey growers' *net returns* from 1947 on, and for the next few years, may fall considerably below the highly profitable average of 1943 through 1946.

While it is not the purpose of this series of publications to offer marketing advice to growers, it would seem that one of the problems presented to the industry is that of offering consumers turkey in "smaller packages." Except at the holiday season, most families are not likely to be willing to purchase an entire bird. Aside from the weight of even a small carcass, the amount of money required for an entire bird is usually large when compared with a chicken or suitable cut of red meat.

From the standpoint of supplying turkeys, one factor stands out:

FEED PRICES

Prices continue high. Supplies are still affected by foreign demands. In two or three years, there may be more feed at lower prices.

Studies made by the Agricultural Extension Service of the University of California indicate that feed costs may reach as much as 70 per cent (and over) of the total production cost of turkeys. This indicates that feed prices will be factors in determining the location of production. Data on a comparison between feed costs and turkey prices are available for the entire country since 1933. The general tendency was for turkey values to command more in grain values through 1945. During 1946 and 1947, turkey values in terms of grain were definitely lower (fig. 5, p. 17).

In the five years 1941–1945, turkey-feed price ratios for the state and nation

were very close—on the average, one pound of turkey in the United States was equal in value to 10.5 pounds of grain, while in California, the ratio was 10.3. In both 1946 and 1947, the comparisons became more unfavorable for California. For example, the turkey-feed price ratio for the state in 1947 had dropped to 6.6 as compared with 7.7 for the nation.

Turkey growers are concerned, and rightly so, over future feed prices. At present (February, 1948) there may be little likelihood of much lower feed prices until the year's (1948) harvests are known. Carryovers of the 1947 crop are small. The demand for grain from Europe will undoubtedly continue for some few years to come. This will in turn be influenced by production abroad as well as production in the United States. It would appear that in two or three years, given normal crops, the demands from the rest of the world should lessen, and feed may be in greater supply at lower prices.

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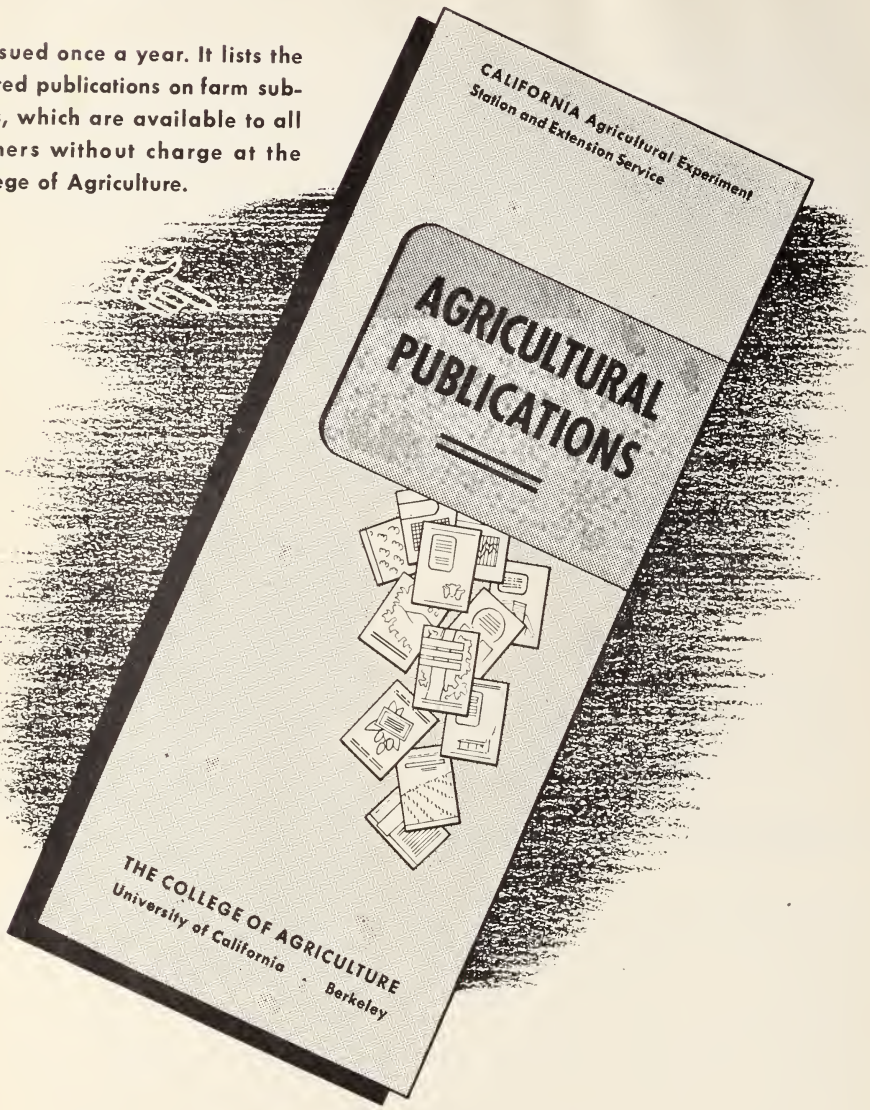
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